Fall 11-12-2020

Climate Change

Dan Etling
detli612@live.kutztown.edu

Climate Change

By Dan Etling

What is a wicked problem? How is climate change a wicked problem? Should we care about climate change? Similar to wicked problems, all of these questions have multiple answers. Rittel once said that a wicked problem is a problem that people of society may or may not see every day, it is a problem that escalates more and more through smaller problems that add to the larger problem. A wicked problem does not have a single solution that can make it just go away. They take a lot of time to come up with a solution for just a singular component of a wicked problem. In comparison, wicked problems would be an umbrella and each component of it would fall under the umbrella. Climate change is certainly a wicked problem because it is a problem that has many components to it. Climate change cannot be solved by one solution that will save the planet entirely, it has many components to it, and they all have problems that can be addressed for the betterment of the environment we live in. Some of the components of climate change include, air pollution, water pollution, clean energy, politics and leadership of governments. Air pollution involves things like carbon dioxide in the air and all the different ways people produce carbon emissions through burning of coal and fossil fuels for energy. Water pollution mainly consist of trash and human waste that end up in our oceans, which have a massive impact on oceanic life but also the lives of people. The ocean is a valuable and essential resource that humanity relies on everyday yet more and more trash is dumped into the ocean thus slowly killing the oceans that we need for survival. Clean energy is the alternative to coal burning and using fossil fuels in day-to-day life. Clean energy consists of things like solar power, wind energy or hydropower, which is the creation of energy through moving water. It is energy that can be produced for machines to consume that do not have a negative effect on the

environment. Finally, the politics of climate change is a constant battle for a better future through taxes and regulations but not all policies work and not all leader's care.

Politics in climate change

Just like everything else, there are policies, regulations and legislation that are intended to work towards a greener future, but not all succeed and not all people in positions of power are worried about climate change or the environment in general. Voting is an important aspect of life that all Americans have come across in their lifetimes and having a leader who cares about the climate change crisis is important to many people which it should be because they have the power to make real change in large increments. The current president of the United States, President Trump, is not someone in a position of power who cares about the environment and climate change and it is safe to assume that he will not act on any climate change policies that hurt the United States economy in any way. In fact, President Trump is rolling back a lot of emissions standards set by the Obama Administration. This mainly affects the domestic automobile producers. The Trump administration has attacked important agencies in the past like the Environmental Protection Agency (EPA). The Trump administration has called for a "slashing" in the budget for the EPA by 2.4 billion dollars which is about 31 percent of their budget. Also, the EPA would suffer a loss of three thousand two hundred jobs because of the budget cost. Luckily this was not put into place and due to the government shutdown of late 2018 and early 2019, the EPA only suffered a loss of 81 million dollars in budget cuts thus no jobs were lost in the process. At the beginning of the 2018 fiscal year the Trump administration planned to cut out about 2 billion dollars from the Department of Energy (DOE). That is important because the Department of Energy does a tremendous amount of research and study of clean energy and how we as consumers can incorporate clean energy into our daily lives. In the

next few days there will be a presidential election held, President Trump and VP Joe Biden. Biden plans to immediately activate the United States into the Paris accords, a global plan to reduce carbon emissions to zero by 2050. He also wants to spend 1.7 trillion dollars in technology development to create more sustainable clean energy, by doing this, Joe Biden claims that it will create over ten million new jobs in the United States. The Trump administration has not yet put out a plan for his possible re-election. Voting is important for many reasons and the planet we live on is also important, vote for someone who will make a significant change to help fight climate change.

Air Pollution

The air we breathe every day and night is super valuable and most people take it for granted, but what happens when there simply isn't enough to go around? Although that's not the most fun idea to think about, unfortunately due to more and more air pollution, the most common source of air pollution is the automotive industry. In fact, the Environmental Protection Agency reported in 2019 from a study taken in 2017, 59% of the greenhouse gases produced in the United States are from cars and gasoline fueled, small trucks. When it comes to larger vehicles like eighteen-wheelers and heavy duty trucks are responsible for 23% of greenhouse gasses produced in the United States, the other 18% of emitters come from boats, aircrafts and the few rail systems that still burn coal or gas for fuel according to scientists. This is a very important statistic because the current president of the United States, Donald Trump is rolling back a lot of emissions regulation set from the past Obama administration. The emission regulation set upon the automotive industry was put in place to force the company to produce cars with less harmful emission, and because of this, manufacturers were forced to spend more money on technologies and research that goes into making cars less harmful to the environment. The rollbacks by the

Trump administration save domestic automotive makers about 100 million dollars in average regulation fees and production processes. The President reported an increase in jobs in the nation and a decrease in the price of cars to American consumers. On a more broad scale model, in 2017, transportation made up 29% of the total greenhouse gases produced in the United States. Just behind transportation, the second largest contributor of greenhouse gases is the production of electricity at 28% and third contributor is industrial America at 22%. Most experts on the subject of climate change say the leading cause of extreme weather phenomena is carbon emissions. In recent years, storms have gotten more intense as well as droughts leading to wildfires and in present time California has seen the most wildfires in the United States in recent history. Globally, Australia, Africa and South America all have seen disastrous droughts along with rapid wildfires. Meanwhile in Japan recently pledged to be carbon neutral by 2050. The prime minister of Japan wants to research more into nuclear technology in order to create more clean and sustainable energy. Greenhouse gases are a huge problem for society, and I think there is a solution, and I'm hopeful that in the future humanity will find a way to live emissions free, but that is only a component of the bigger problem that is climate change. If we were to do nothing about the greenhouse emissions in this country, more and more cities would be backfilled with smog, natural disaster would get even more intense, species of all kinds would die off from breathing more carbon than oxygen. A world like this is hard to imagine but this could be our reality if we don't do something about greenhouse gas emissions.

Water & Plastic Pollution

Water is the most essential thing that all living beings need to survive, and humanity uses water for all kinds of different things. Water pollution is another aspect that holds massive significance in the developing climate change issues. In today's day in age there are five "great

patches", as scientist refer to them, of trash larger than the state of Texas floating around the world. In a 2018 study by the Smithsonian, each great patch consists of 1.8 trillion pieces of plastic. These islands of trash move with the currents of the ocean and contaminate it more and more every day. The University of Georgia associate professor Jenna Jambeck reported in 2015 that approximately 8 metric tons of plastic is dumped into the ocean every year. When plastic ends up in our ocean's scientist have reported that micro molecules in the plastics break down into the ocean water and the marine life living in it are eating and absorbing those micro particles of plastic. Ocean life is a key resource of food or society but if the seafood becomes contaminated with plastic molecules in them, we lose an essential food resource and that threatens the longevity of humanity. Many people would agree that so far recycling has been the best way to not pollute the oceans or add to landfills around the world but Johnathan Baillie, chief scientist and vice president of the National Geographic Society, reported in 2018 that 91% of plastic "is not actually recycled". The Environmental Protection Agency recorded only 9% of plastics were recycled in 2015. There has been legislation to help reduce the amount of plastic society produces like the tax on plastic bags. In 2017, some states enacted a tax on plastic bag consumers at places like supermarkets and stores to lessen the use of plastic bags. Its pretty ironic that something that works so well and has so many applications but yet it kills the planet we live on more and more daily.

Solution

I have a few ideas that I believe could work to help the environment. My first solution to clean energy usage is to renovate our high-rise buildings and building that are commercial use to operate off solar energy through solar panels on roof tops. This should cut back some of the greenhouse gases that humanity produces My second solution to cut back of greenhouse gasses

and clean energy production is that we should focus our time and government resources to upgrade the nation electric grid. As of right now, the electrical grid that runs throughout the entire country cannot handle the flocculating inputs of solar and wind energy on a day to day basis. I believe if a technological advancement is made, more windfarms and solar fields can be built that could power entire cities. Imagine if a small windfarm off the coast of Long Island could power all of New York City. My final solution for plastics and water pollution is for a ban on non-biodegradable plastics in around the world. Biodegradable already exist so the hard part is done, now we need to use that new technology to make a real and positive impact.

In conclusion, I've told you what a wicked problem is and why climate change is a wicked problem. Then I broke down four different components of climate change to further explain why it is a wicked problem and finally I gave some solutions that I believe will make a difference. Taking care and protecting the plant is immensely important and I think that everyone is capable of making a positive difference in the world.

Abstract

Climate change is a problem with no single solution. It has many parts, and, in this article, I break down each component of the wicked problem that is climate change. A shift in power and leadership bring change across the board, so what does the new president have planned for climate change? Anytime someone thinks of climate change, the immediate thought that comes to mind is the carbon footprint but how serious is that? If cars are the leading cause of carbon emissions, what's the other option? Are we supposed to not drive places? Many people already know about the issue of trash in the ocean, but what about the five "great patches" of trash floating around the world. This article will show you just how big of a problem climate change really is and will answer all of these different questions

Work Cited

- Lyons, Christina L. "Climate Change." *CQ Researcher*, 5 Oct. 2019, library.cqpress.com/cqresearcher/cqr_ht_climate_change_2019
- Ladika, Susan. "Climate Change." *CQ Researcher*, 29 June 2017, library.cqpress.com/cqresearcher/cqr_ht_climate_change_2017.
- Mossman, Matt. "Renewable Energy Debate." *CQ Researcher*, 15 Mar. 2019, pp. 1-58, library.cqpress.com/cqresearcher/cqresrre2019031500.
- Plumer, Brad. *A Field Guide to the Election and Climate Change*. 14 Oct. 2020, www.nytimes.com/interactive/2020/10/14/climate/biden-trump-climate-change-questions.html?searchResultPosition=2.
- Karaim, Reed. "Fuel Efficiency Standards." *CQ Researcher*, 19 June 2020, pp. 1-55, library.cqpress.com/cqresearcher/cqresrre2020061900.
- Dooley, Ben, et al. *Japan's New Leader Sets Ambitious Goal of Carbon Neutrality by 2050*. 26 Oct. 2020, www.nytimes.com/2020/10/26/business/japan-carbon-neutral.html.
- Lemons, Jane Fullerton. "Plastic Pollution." CQ Researcher, 7 Dec. 2018, pp. 1017-40, library.cqpress.com/cqresearcher/cqresrre2018120700.